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U.S.S.N.: 10/786,965
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EMC Docket No.: EMC-02-132CIP1

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the Application.

Listing of Claims:

1. (Currently amended) A method of enabling a user to construct for simulating performance [[on]] a target data storage system to replace a source data storage system through consolidation of one or more data storage components of the source data storage system, one or more data storage systems,

the method comprising the steps of:

displaying a user interface to the user, the user interface including a selector to enable the user to select a data storage component for inclusion in the target data storage system;
merging the data storage component into the target data storage system, including
obtaining receiving configuration characteristics and workload characteristics for the data storage
component:

receiving utilization data related to the utilization of one or more data storage systems;
receiving performance characteristics of work performed on the one or more data storage
systems;

simulating performance [[on]] of the target data storage system one or more data storage
systems using one or more workloads the utilization data and performance characteristics to
obtain utilization and performance information for each data storage system component and for
the target data storage system and that of a system including said one or more data storage
systems; and

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graphically representing the utilization or performance of each of data storage components in the target data storage system on the user interface to enable the user to visually determine whether the target data storage system meets a desired performance.

~~determining whether said performance the one or more data storage systems exceeds a corresponding level of performance, or the system including said one or more data storage systems exceeds a corresponding level of performance, wherein said level of performance is associated with at least one element selected from the group consisting of: a required utilization, a response time, and a workload;~~

~~indicating which of said one or more data storage systems are causing the excessive level of performance; and~~

~~altering a configuration of at least one of said one or more data storage systems to sustain the simulated performance at a given level, wherein said altering includes adding at least one additional data storage system to said one or more data storage systems causing the excessive level of performance and optimizing individually front end and back end performance of each of said one or more data storage system..~~

2. (Currently amended) The method of claim 1, ~~and further comprising performing a storage management function after performing the step of simulating performance on the one or more data storage systems wherein the workload characteristics are obtained from a workload analyzer that analyzes the workload characteristics of the associated data storage component when executing in the source storage system in response to the one or more workloads.~~

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3. (Currently amended) The method of claim 1 [[2]], wherein the workload characteristics are input by the user storage management function is a performance modeling function.
4. (Currently amended) The method of 1 wherein the user consolidates the source data storage system by constructing the target data storage system to include fewer data storage components than the source data storage system ~~claim 2, wherein the storage management function is a storage capacity planning function.~~
5. (Currently amended) The method of claim 1 wherein the target data storage system includes data storage components of higher capacity than the source data storage system ~~2, wherein the storage management function is a consolidation of one or more data storage systems that may be denominated as one or more source data storage systems into one other data storage system that may be denominated as a target data storage system.~~
6. (Currently amended) The method of claim 5, wherein the ~~one or more source data storage systems or the~~ target data storage system is configured to be load balanced in accordance with information yielded from the step of simulating performance on the ~~target one or more~~ data storage systems.
7. (Currently amended) The method of claim 1 wherein a graphical representation of the utilization or performance on the user interface visually indicates the feasibility of consolidating a plurality of data storage components of the source data storage system to fewer or newer data

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storage system components. 5, wherein the one or more source data storage systems or the target data storage system is configured to be at least partially optimized for performance in accordance with information yielded from the step of simulating performance on the one or more data storage systems.

8. (Currently amended) A system for simulating and displaying performance or utilization information of a target data storage activity on one or more data storage systems, the system includes comprising:

a computer having a memory and a display;
computer-executable program code, operable when executed upon by a processor of the system to: operating in memory, wherein the computer-executable program code is configured for execution of the following steps:

display a user interface to on the display, the user interface including a selector to enable a user to select a data storage component for inclusion in the target data storage system;

merge the data storage component into the target data storage system, including obtaining receiving configuration characteristics and workload characteristics for the data storage component;
receiving utilization data related to the utilization of one or more data storage systems;
receiving performance characteristics of work performed on the one or more data storage systems; and

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~~simulating simulate performance [[on]] of the target data storage system one or more data storage systems using one or more workloads the utilization data and performance characteristics to obtain utilization and performance information for each data storage system component and for the target data storage system and that of a system including said one or more data storage systems; and graphically represent the utilization or performance of each of data storage components in the target data storage system on the user interface to enable the user to visually determine whether the target data storage system meets a desired performance.~~

~~determining whether said performance of the one or more data storage systems exceeds a corresponding level of performance or the system including said one or more data storage systems exceeds a corresponding level of performance, wherein said level is associated with at least one element selected from the group consisting of: a required utilization, a response time, and a workload;~~

~~indicating which of said one or more data storage systems are causing the excessive level of performance; and~~

~~altering a configuration of at least one of said one or more data storage systems to sustain the simulated performance at a given level, wherein said altering includes adding at least one additional data storage system to said one or more data storage systems causing the excessive level of performance, and optimizing individually front end and back end performance of each of said one or more data storage system.~~

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9. (Currently amended) The system of claim 8, ~~wherein the program code is further configured for performing a storage management function after performing the step of simulating performance on the one or more data storage systems; wherein the workload characteristics are obtained from a workload analyzer that analyzes the workload characteristics of the associated data storage component when executing in a source storage system in response to the one or more workloads.~~

10. (Currently amended) The system of claim [[9]] 8, ~~wherein the storage management function is a performance modeling function; workload characteristics are input by the user.~~

11. (Currently amended) The system of claim [[9]] 8, ~~wherein the storage management function is a storage capacity planning function; wherein the user consolidates a source data storage system by constructing the target data storage system to include fewer data storage components than the source data storage system.~~

12. (Currently amended) The system of claim [[9]] 8, ~~wherein the storage management function is a consolidation of one or more data storage systems that may be denominated as one or more source data storage systems into one other data storage system that may be denominated as a target data storage system; wherein the target data storage system includes data storage components of higher capacity than the source data storage system.~~

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13. (Currently amended) The system of claim [[12]] 11, wherein the ~~one or more source data storage systems~~ or the target data storage system is configured to be load balanced in accordance with information yielded from the step of simulating performance on target ~~the one or more~~ data storage systems.

14. (currently amended) The system of claim 12, wherein the ~~one or more source data storage systems~~ or the target data storage system is configured to be at least partially optimized for performance in accordance with information yielded from the step of simulating performance on the ~~one or more~~ target data storage systems.

Claims 15 - 21. (cancelled)